NEVADA CLIMATE SUMMARY

Quarterly Summary
January, February, March
Volume 22, Numbers 1-3

JANUARY-MARCH CONDITIONS

By Heather Kemp

Western Nevada

January conditions presented themselves with a major storm from the morning of the 7th to the 11th, bringing several feet of snow to the Sierra and one to two feet in the valleys of western Nevada. The NWS reported that this storm, combined with the December 2004 storm, created one of the largest on record at Reno. 38.7" of snow fell between December 30th and January 8th, ranking as the 2nd largest 10-day total on record for Reno.

High pressure built in along the coast to bring dry, cold weather until the 15th, when an area of low pressure brought some light precipitation to northwest Nevada. By the 17th, high pressure had reestablished bringing warm temperatures aloft, resulting in temperatures as high as 50°F at 10,000', while the valley's below 5,000' remained very cold, causing a strong inversion and freezing fog. Two weak systems moved through and broke up this inversion around the 25th and 26th. With the first weak system, a freezing rain event occurred, with an accumulation of ice to ¼" in some valleys in Washoe County. The second system dropped rain and snow, with light rain in the valleys and ~6" of snow in the high elevations of the Sierras.

February temperatures averaged near normal for the month, but overnight low temperatures were just over 5°F above normal and daytime highs were below normal, by the same 5°F. Strong high pressure dominated through the 6th of the month bringing mild conditions to the mountains and fog to the valleys east of the Sierra. After the 6th, a series of weak systems moved through the area and weakened the inversion, to create more typical February temperatures. This pattern changed on the 14th, after low pressure off the coast sent a couple of strong storms into West-Central Nevada. The first system, on the 14-15th, brought 6-20" of snow to the Sierra from Lake Tahoe south. Light rain was recorded south of Interstate-80, while the northern portion of the state experienced very light precipitation.

The next system appeared from the 20-22nd. Still, most of the precipitation fell south of I-80, with snow accumulations of 1-2' in the central Sierras. Rainfall was light in western Nevada.

March brought above average temperatures at the Reno Airport, averaging 2.9°F above normal. A weak system passed through on the 1st and 2nd, bringing only a couple of inches of snow to the Sierra, and light rain to western Nevada. A strong ridge built in from the 4-12th, warming temperatures back up to normal, and bringing Reno 70°F temperatures from the 8-12th. Sierra highs, above 6,000' were near 60°F at this time.

The 13th saw cool dry weather, dropping temperatures by a minimum of 5°F for the rest of the month. This cool dry weather was broken on the 19th, when a storm moved through bringing almost 2' of snow to the higher elevations of the Sierras. The 24th, an upper level low-pressure system developed off the coast, and brought more snow to the Sierras (over 5,000') and light precipitation to western Nevada.

Another system approached on the 28th through the 30th, and most of the precipitation from this system

fell over the northern half of the state. A foot of snow accumulated around Lake Tahoe, and more at higher elevations. Precipitation was, again light across western Nevada, except in northern Washoe County where precipitation accumulated to almost .25 inches.

Eastern Nevada

The strongest storms moved through the northeast the second week of January, bringing large amounts of snow, very cold temperatures, and episodes of fog to northern Nevada. Three-to-five inches of snow were deposited over northern and east central Nevada the first week.

February also produced unsettled weather, mostly over the eastern half of Nevada. As high pressure gave way, winds and temperatures increased across the Great Basin, and fog occurrence decreased. The Elko area continued to experience a weak inversion, which created early-morning fogs for much of the month.

The month of March saw a few weak systems move though in the first half, while the southern half of the state stayed fairly dry. During the second half of the month a series of Pacific storms created some unsettled weather, with precipitation falling over most of the state. All rivers stayed within their banks during the first quarter of 2005.

Southern Nevada

January 9-12th, the NWS reported flooding along the Virgin River, Meadow Valley Wash and Muddy River in Lincoln and northeast Clark counties in southeast Nevada. Meadow Valley Wash, near Caliente, was destroyed. Estimated peak flow was between 2,500 and 3,000cfs, which, if verified, would be a new record peak. The previous peak being 2,400cfs in March of 1978. This flooding occurred as a strong area of low pressure off the Pacific Northwest coast entrained sub-tropical moisture and brought it through the southern Great Basin, creating an extended period of precipitation. Snowmelt, due to higher temperatures at the lower elevations after the first snowfall event, also contributed to the flooding.

The first system moved in on January 7th, bringing 2-4 inches of snow to the western portion of the Las Vegas Valley, at lower elevations. Then the sub-tropical moisture streamed in through the 9th, raising that snow level to over 7,500'.

The Las Vegas NWS reported 100 structures flooded and 250 people evacuated in the Moapa Valley area of Clark County. The Red Cross stated that 350 homes were affected by flooding in Overton. In Mesquite, 75 homes and 150 people were evacuated. In Mohave County, at Beaver Dam, the main road was washed out, and 22 homes were damaged or destroyed in Beaver Dam and Littlefield. Lincoln County reported railroad tracks and 26 rail cars were washed away in Rainbow Canyon, 60 houses damaged in/near Caliente. One-hundred twenty juvenile offenders and 20 staff members were evacuated from the Caliente Youth Center via helicopter, and half of Caliente's 1,200 residents were evacuated.

Sub-tropical moisture continued to flow into the southern Great Basin, bringing well above normal precipitation. Storms continued to move across the area from the 10th to the 12th, and a slow moving low-pressure system hit the area from the 17-26th. The 17-26th system, lead to flash flooding of the streets and drainages in the northwest portion of the Las Vegas Valley on the 21st.

According to the Las Vegas NWS, several Las Vegas rainfall records were broken: 1) Three consecutive months of greater than 2 inches of rainfall in December 2004 and January/February 2005 had never occurred in Las Vegas, **2)** The Winter season, December 2004-February 2005, was the wettest on record. The old record being 5.86 inches from December 1992 – February 1993. The new record is 6.62 inches for this winter season.

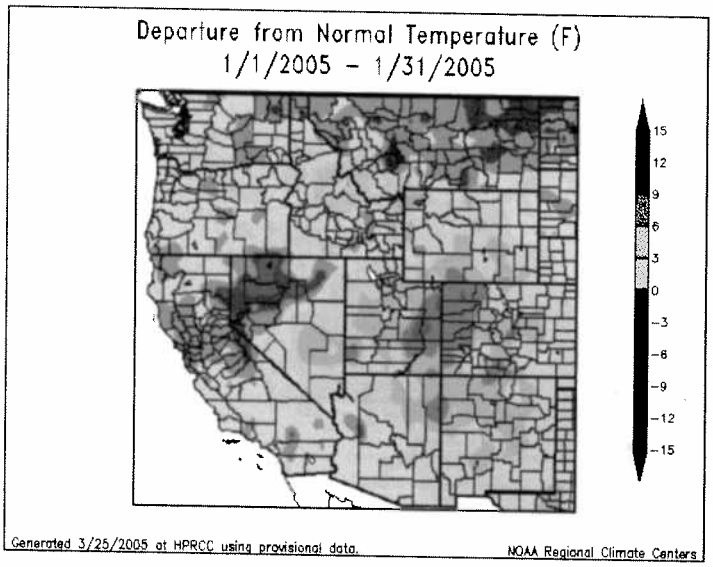
March provided a welcome break from the flooding, as it was the first month since September of 2004 that the monthly rainfall fell below the monthly average.

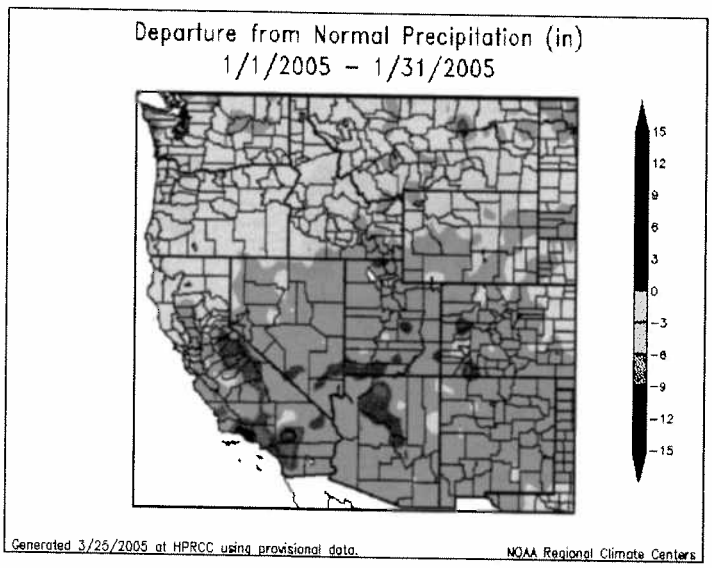
Climate is what we expect, weather is what we get.
Mark Twain

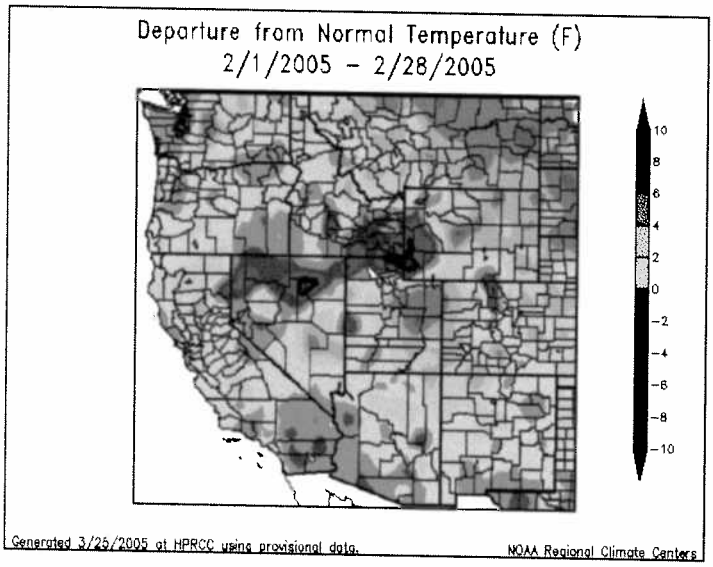
Nature has no mercy at all. Nature says, "I'm going to snow. If you have on a bikini and no snowshoes, that's tough. I am going to snow anyway."
Maya Angelou

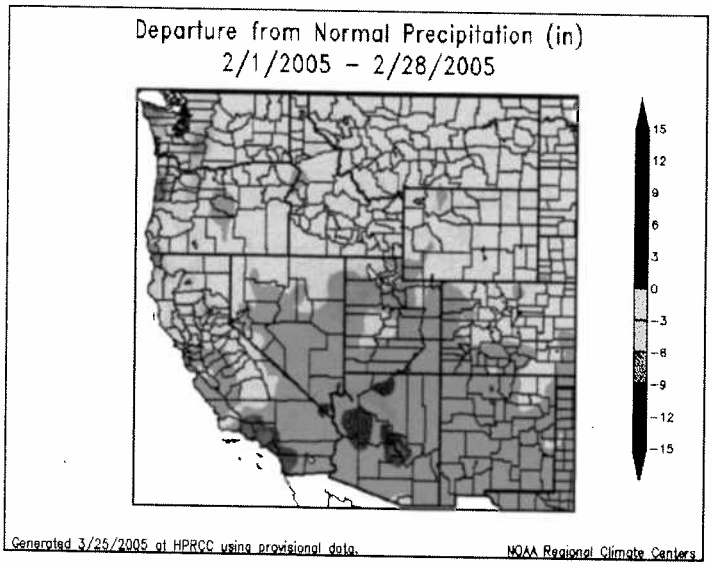
There is no season such delights can bring
As summer, autumn, winter and spring.
William Browne

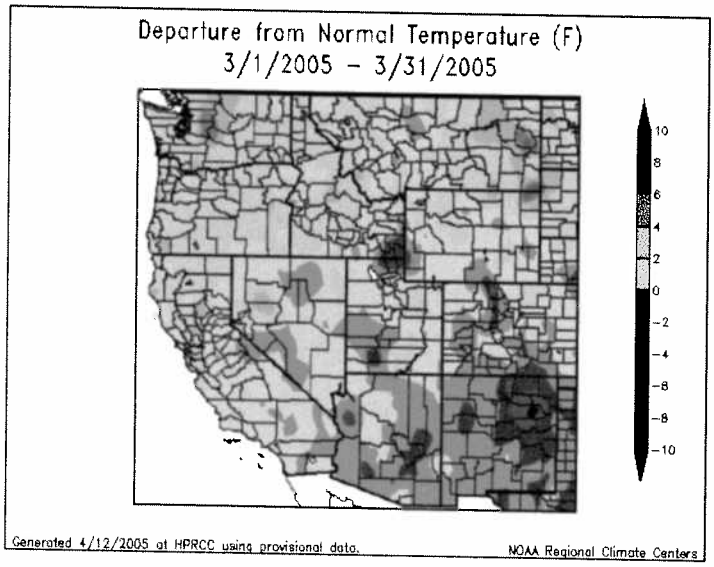
One can find so many pains when the rain is falling.
John Steinbeck

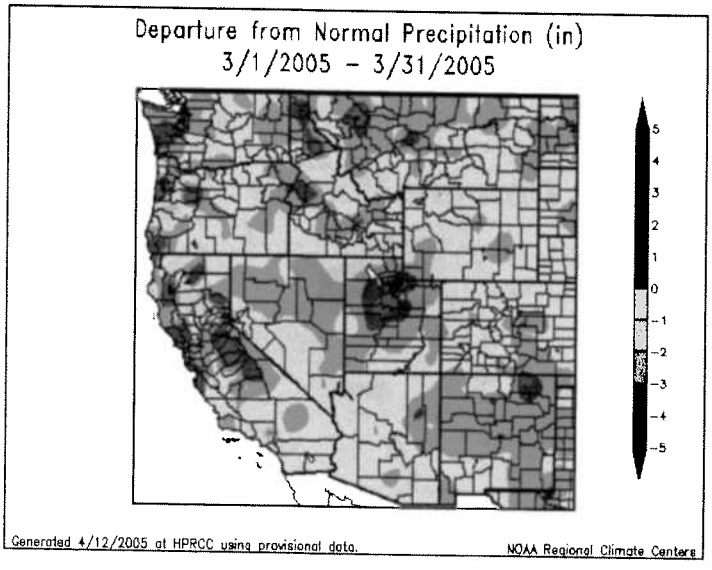

Departure from Normal Temperature (F)
1/1/2005 - 1/31/2005
15
12
9
6
3
0
-3
-6
-9
-12
-15
Generated 3/25/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers


Departure from Normal Precipitation (in)
1/1/2005 - 1/31/2005
15
12
9
6
3
0
-3
-6
-9
-12
-15
Generated 3/25/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers

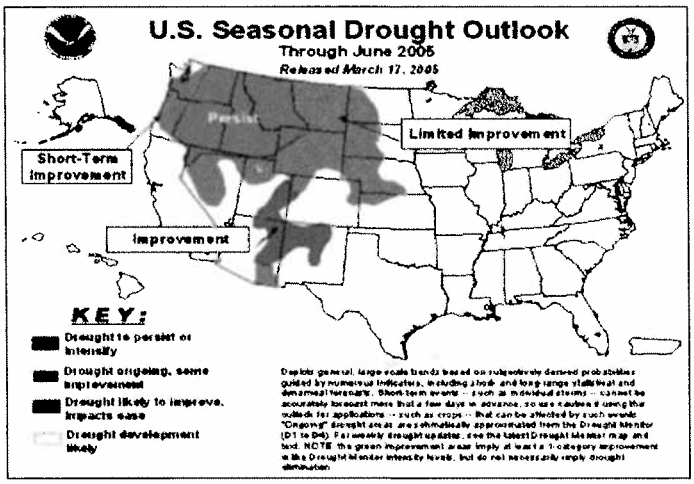

Departure from Normal Temperature (F)
2/1/2005 - 2/28/2005
10
8
6
4
2
0
-2
-4
-6
-8
-10
Generated 3/25/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers

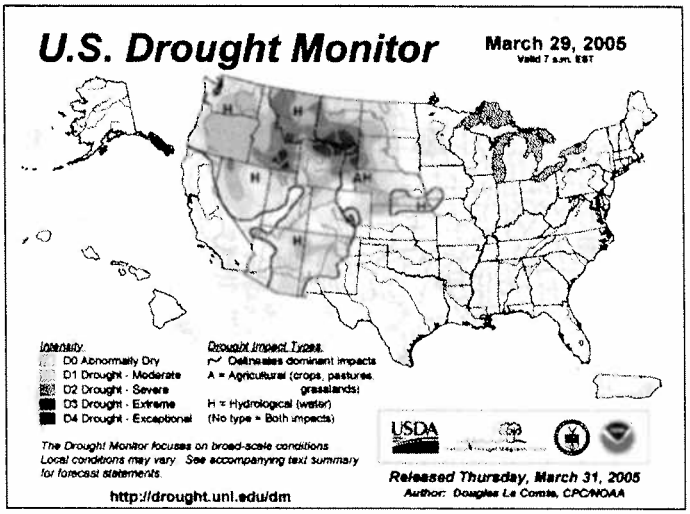

Departure from Normal Precipitation (in)
2/1/2005 - 2/28/2005
15
12
9
6
3
0
-3
-6
-9
-12
-15
Generated 3/25/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers


Departure from Normal Temperature (F)
3/1/2005 - 3/31/2005
10
8
6
4
2
0
-2
-4
-6
-8
-10
Generated 4/12/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers


Departure from Normal Precipitation (in)
3/1/2005 - 3/31/2005
5
4
3
2
1
0
-1
-2
-3
-4
-5
Generated 4/12/2005 at HPRCC using provisional data.
NOAA Regional Climate Centers

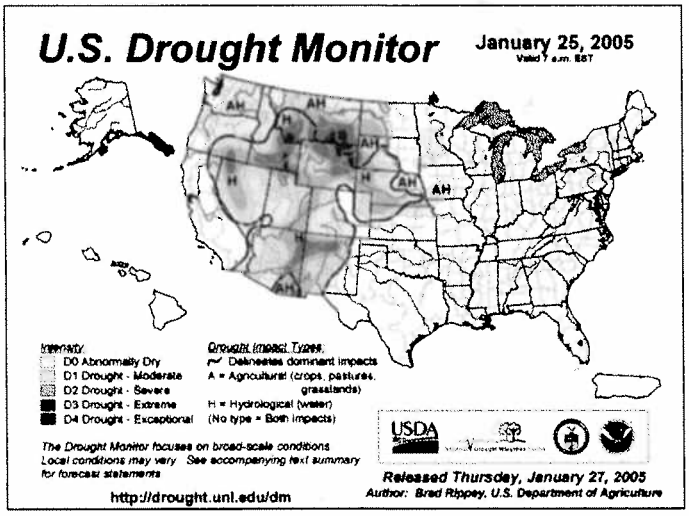
DROUGHT OUTLOOK

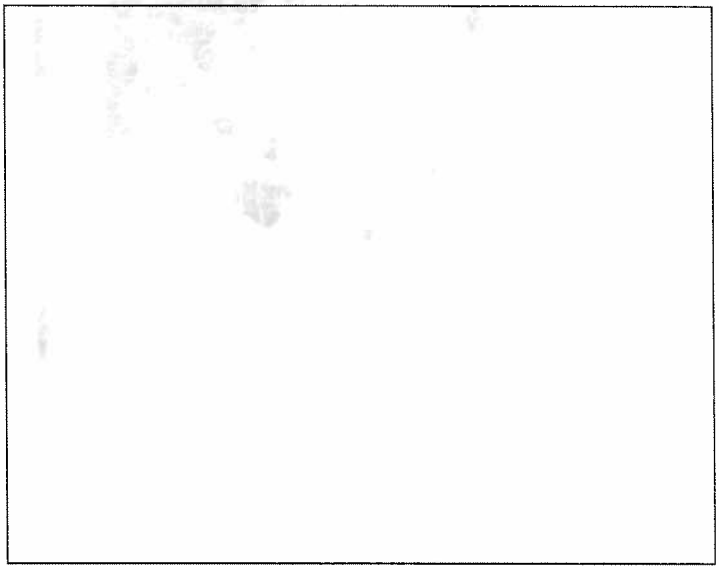


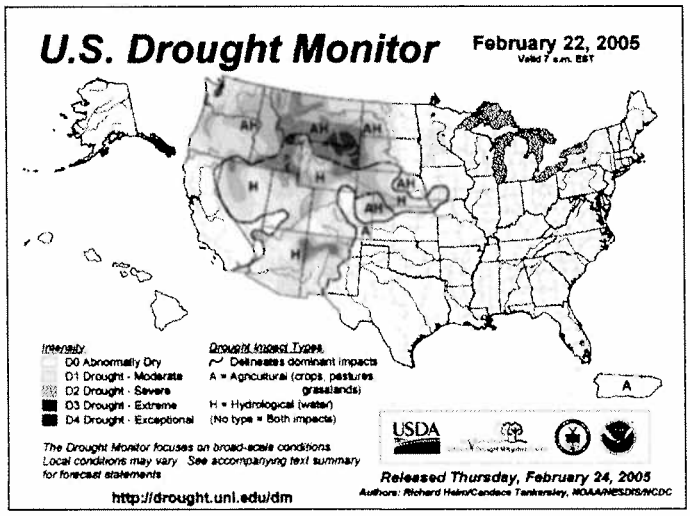


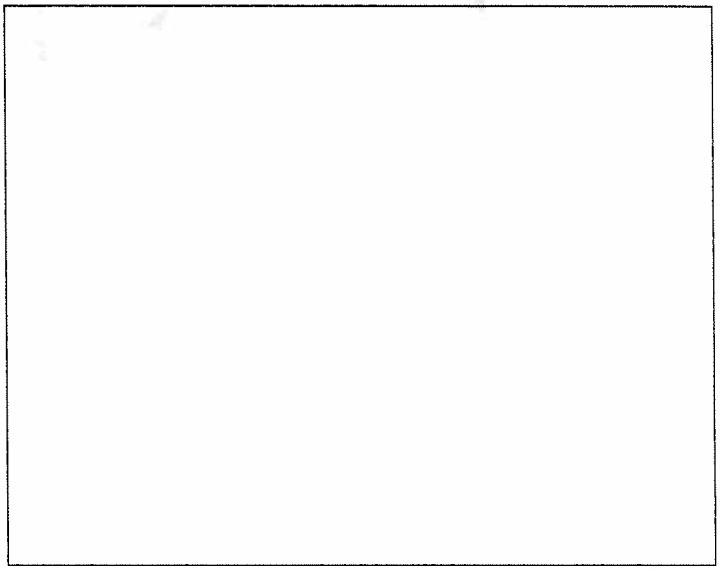
Drought conditions have eased in southern and eastern Nevada, while central and northern drought stricken areas persist.

Official Seasonal Forecast
May-June-July 2005
From Climate Prediction Center









FEATURE ARTICLE:

Written by Heather Rainford

As summer approaches so does an increase in ultraviolet radiation. While it is inviting to spend a summer day outside soaking up the sun, you might want to be careful just how much sun you soak.

During the summer the amount of ultraviolet radiation increases to levels that can cause health problems. While "small quantities of ultraviolet-B radiation (UV-B) are essential to human health," (1) it is the larger amounts of UV-B that are harmful. Some of the health effects include skin, eye and immune system problems.

The most common skin effect is a sunburn that lasts a couple of days, but with a repeat of these sunburns comes an increase in skin cancer as well as "accelerate[d] skin aging, and the gradual loss of the skin's elasticity result[ing] in wrinkles and dry, coarse skin" (2). Two types of skin cancer occur, non-melanoma and malignant melanoma (results in more death than the first). Children are the most susceptible, but all that are in the sun need to be protected.

As day length increases and sun angle decreases the threat to your eyes increases as well. The major effect is the threat of cataracts, in the long run leading to blindness (2). Summer is a time for increased outdoor activity, however during the winter a snowy environment can have the same effects. Wearing sunglasses and hats are the best preventive measures to protect your eyes.

Studies have shown that people have had extended sun exposure, risk a decrease of the immune system (2 and 3). With the immune system not working as it should, the frequency of infections, and colds increase.

Radiation levels increase with altitude, latitude (closer to the equator), and ground reflection. Each day the amount of UV can change with all these factors, especially cloud-cover. During cloudy days there is still UV coming from the sun and precautions should still be taken.

While you enjoy the warmth of the summer sun, help protect your self by covering and applying sunscreen to you ears, face, neck and forearms. These are the most likely places for exposure.

1 "Overview of Health Effects form Increased Ultraviolet-B Exposure due to Ozone Depletion" www.ciesin.org/TG/OZ/overview.html.

2 "Global Solar UV Index: A Practical Guide" joint publication of: World Health Organization, World Meteorological Organizations, United Nations Environment Programme, and International Commission on Non-Ionizing Radiation Protection

3 "Study Refutes UV Radiation Decreases During the 1980's" *www.publicaffairs.noaa.gov/pr97/apr97/noaa97-r603.html*

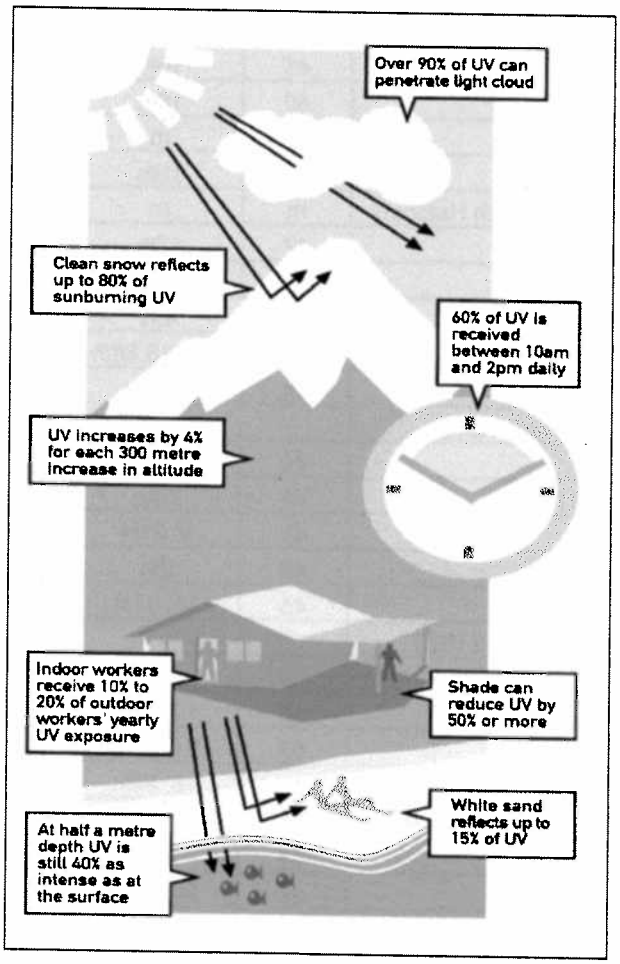


Image above, and table below are from the "Global Solar UV Index: A Practical Guide". A joint recommendation of the WHO, WMO, United Nations Environment Programme, and the International Commission on Non-Ionizing Radiation Protection.

Fact vs. Fiction about Sunburns

FALSE	TRUE
A suntan is healthy.	A tan results from your body defending itself against further damage from UV radiation.
A tan protects you from the sun.	A dark tan on white skin offers only limited protection equivalent to an SPF of about 4.
You can't get sunburnt on a cloudy day.	Up to 80% of solar UV radiation can penetrate light cloud cover. Haze in the atmosphere can even increase UV radiation exposure.
You can't get sunburnt while in the water.	Water offers only minimal protection from UV radiation, and reflections from water can enhance your UV radiation exposure.
UV radiation during the winter is not dangerous.	UV radiation is generally lower during the winter months, but snow reflection can double your overall exposure especially at high altitude. Pay particular attention in early spring when temperatures are low but the sun's rays are unexpectedly strong.
Sunscreens protect me so I can sunbathe much longer.	Sunscreens should not be used to increase sun exposure time but to increase protection during unavoidable exposure. The protection they afford depends critically on their correct application.
If you take regular breaks during sunbathing you won't get sunburnt.	UV radiation exposure is cumulative during the day.
If you don't feel the hot rays of the sun you won't get sunburnt.	Sunburn is caused by UV radiation which cannot be felt. The heating effect is caused by the sun's infrared radiation and not by UV radiation.

Table 3: UV radiation danger: Facts and fiction

STATISTICS FOR THE MONTH OF JANUARY 2005									
	Extreme High	Day	Extreme Low	Day	Average High	Average Low	Average Monthly Temp	Precip	Snowfall
Climate Division 1 (NW)									
Cold Springs	48	9th	-11	13th	39	14	27	1.93	23.40
Dayton	54	16th	12	13th	42	20	31	1.39	13.00
Desert Valley (precip. only)								m	
Fernley	46	9th	2	13th	34	20	27	1.06	12.80
Flanigan	47	28th	-4	13th	35	20	28	0.81	2.0/nr
Flying M Ranch	54	22nd	8	6, 7th	44	21	33	1.25	nr
Gardnerville	45	16th	0	13th	39	16	28	1.22	19.00
Hay Creek*	40	16th	10	23rd	35	17	26	6.04	25.30
Hualapai	m	m	m	m	m	m	m	m	m
Jacks Valley	46	16th	19	13th	41	27	34	2.85	nr
Lahontan Nat'l Fish Hatchery	m	m	m	m	m	m	m	m	m
Minden	47	17th	6	13th	40	20	30	1.41	14.00
Mogul	44	15, 16, 27th	6	5th	39	17	28	2.50	34.00
Reno, N. Virginia	46	9th	10	13th	40	24	32	1.84	19.80
Sheridan Acres	43	9,10,16,28th	7	13th	36	20	28	2.48	25.00
Spanish Springs	44	9, 28th	-3	13, 14th	35	18	28	1.17	28.00
Stillwater (Precip. only)								1.35	0.50
Sulphur	44	3, 9, 29th	2	13th	38	18	28	1.00	nr
Washoe #10	46	28th	9	10th	40	22	32	0.31	32.30
Wellington	45	9, 31st	-2	13th	40	15	27	1.47	3.10
Wilson Canyon	48	9th	14	7th	39	23	31	1.11	nr
Zephyr Cove	45	16, 31st	17	12th	36	26	31	2.07	nr
Climate Division 2 (NE)									
Boies Ranch	46	29th	-10	14th	35	13	23	1.90	0.00
Jarbidge	62	19, 20th	8	5th	43	22	33	2.22	26.60
Reese River	53	21, 23rd	-8	2nd	41	14	27	0.75	0.00
Ruby Valley	48	16, 24th	3	1st	41	17	29	0.67	24.00
Climate Division 3 (Central)									
Belmont	54	20th	2	5th	38	22	30	2.19	0.00
Gabbs	54	26, 27th	9	7th	44	25	34	1.46	9.50
Goldpoint	53	19,20,24,25th	3	7th	44	24	34	2.04	nr
Manhattan	58	22nd	8	5th	38	21	29	0.08	14.00
Marietta	52	31st	-7	7th	41	18	30	1.29	0.5/nr
Pioche - Lister Ranch	62	21st	-6	7th	45	24	34	1.64	17.50
Schurz (precip. only)								0.83	nr
Tonopah	61	19th	8	7th	44	25	34	2.68	14.00
Climate Division 4 (S)									
Boulder Beach	70	23rd	37	7, 13th	60	46	53	1.78	0.00
Las Vegas (NWS Station)	71	19th	34	7th	59	44	51	2.07	0.00
Lee Canyon	53	20, 23rd	-4	7th	40	16	28	13.66	59.30
Overton Beach*	69	18th	33	7, 8th	59	42	51	1.76	0.00
Sandy Valley (precip. only)								3.11	nr
California Stations									
Bare Ranch*	52	19	4	14, 17th	44	21	32	0.78	0
Honey Lake Wildlife Refuge	m	m	m	m	m	m	m	m	m
Janesville, CA	44	29th	11	14th	34	22	28	3.41	24.30
Lake Tahoe - USCG*	42	18th	9	13, 29, 30th	36	21	28	2.53	nr
Truckee/Tahoe AP Dist., CA	m	m	m	m	m	m	m	m	m

* - Incomplete data m - Missing data
nr - Not Recorded

STATISTICS FOR THE MONTH OF FEBRUARY 2005									
	Extreme High	Day	Extreme Low	Day	Average High	Average Low	Average Monthly Temp	Precip	Snowfall
Climate Division 1 (NW)									
Cold Springs	54	26th	8	3rd	45	25	35	0.93	2.00
Dayton	58	13, 14th	20	1st	45	28	36	1.04	0.50
Desert Valley (precip. only)								m	
Fernley	62	28th	19	9th	47	29	38	1.08	1.50
Flanigan	58	26th	17	5th	46	28	36	0.17	nr
Flying M Ranch	64	13th	20	1,2,4,9,10th	49	26	38	0.69	nr
Gardnerville	57	27,28th	11	3rd	46	26	36	1.50	6.30
Hay Creek*	49	28th	11	4th	40	21	31	0.49	1.30
Hualapai	m	m	m	m	m	m	m	m	m
Jacks Valley	55	25th	22	1,5th	46	32	39	1.61	nr
Lahontan Nat'l Fish Hatchery	60	14th	12	4th	48	28	38	0.76	nr
Minden	58	13,14th	16	3rd	46	29	38	0.87	3.00
Mogul	58	26th	18	4th	46	30	38	1.20	nr
Reno 3WNW									
Reno, N. Virginia	58	13th	22	3rd	48	31	39	0.82	0.25
Sheridan Acres	57	27th	16	3rd	45	29	37	2.13	4.80
Spanish Springs	54	13,26-28th	12	1st	44	27	36	0.36	nr
Stillwater (Precip. only)								0.78	nr
Sulphur	55	25th	9	4th	44	24	34	0.59	nr
Washoe #10	57	27th	20	3rd	47	30	38	1.06	nr
Wellington	57	13th	8	3rd	45	26	36	0.96	4.50
Wilson Canyon	60	13th	20	10th	46	28	37	0.83	nr
Zephyr Cove	49	4th	23	8th	42	30	36	1.49	nr
Climate Division 2 (NE)									
Jarbidge	53	3rd	4	14,15,16th	44	19	31	0.70	5.60
Reese River	50	4,25-28th	5	8th	45	22	33	0.68	nr
Ruby Valley	54	3,23-27th	0	9th	47	19	33	1.04	7.00
Climate Division 3 (Central)									
Belmont	50	3rd	10	7th	41	23	32	2.08	nr
Gabbs	57	15th	21	8th	48	29	39	0.95	1.00
Goldpoint	51	24,25th	19	6,7th	46	26	36	0.98	nr
Manhattan	48	28th	10	8th	42	23	32	0.24	19.00
Marietta	59	12th	20	2,6,10th	53	29	41	0.79	0.00
Pioche - Lister Ranch	55	6th	16	4th	47	26	36	1.90	13.00
Schurz (precip. only)								0.82	nr
Tonopah	54	10th	12	3rd	46	28	37	1.25	0.30
Climate Division 4 (S)									
Boulder Beach	67	17,18th	42	12th	62	50	56	2.22	0.00
Las Vegas (NWS Station)	67	28th	39	3, 9th	61	45	53	2.45	0.00
Lee Canyon	m	m	m	m	m	m	m	m	m
Overton Beach*	69	18th	41	5,8th	64	45	54	2.53	0.00
Sandy Valley (precip. only)								2.65	nr
California Stations									
Bare Ranch*	56	28th	22	7th	50	27	39	0.65	0
Honey Lake Wildlife Refuge	m	m	m	m	m	m	m	m	m
Janesville, CA	54	26th	15	5th	41	29	35	0.96	1.00
Lake Tahoe - USCG	m	m	m	m	m	m	m	m	m
Truckee/Tahoe AP Dist., CA	50	4th	2	1st	41	17	29	1.23	nr

* - Incomplete data m - Missing data
nr - Not Recorded

STATISTICS FOR THE MONTH OF MARCH 2005									
	Extreme High	Day	Extreme Low	Day	Average High	Average Low	Average Monthly Temp	Precip	Snowfall
Climate Division 1 (NW)									
Cold Springs	75	11th	15	15th	56	27	41	0.99	3.60
Dayton	78	10th	24	1st	58	31	45	1.01	0.80
Desert Valley (precip. only)								m	
Fernley	80	9th	23	3rd	63	33	48	0.49	0.00
Flanigan	75	9,12th	23	1st	60	32	46	0.54	0.00
Flying M Ranch	76	10th	22	14,31st	59	31	45	0.48	0.00
Gardnerville	76	9th	16	15th	60	27	43	1.05	0.00
Hay Creek	71	10,12th	18	30th	54	28	41	0.62	2.30
Hualapai	m	m	m	m	m	m	m	m	m
Jacks Valley	72	9th	18	15th	57	36	46	2.03	0.00
Lahontan Nat'l Fish Hatchery	76	9,10th	24	15th	61	31	46	1.01	0.40
Minden	77	10th	21	15th	59	31	45	0.95	3.00
Mogul	74	9th	24	31st	58	31	45	1.86	0.00
Reno 3WNW	76	11th	24	30th	56	33	44	0.92	1.30
Reno, N. Virginia	77	11th	25	15th	61	33	47	0.59	0.00
Sheridan Acres	76	9th	21	15th	59	31	45	1.92	6.20
Spanish Springs	74	9th	13	4th	57	29	44	0.59	0.00
Stillwater (Precip. only)								0.46	
Sulphur	80	10th	17	14th	57	31	44	1.25	0.00
Washoe #10	70	9,12th	24	15,25,30th	57	32	44	0.81	0.00
Wellington	75	9th	21	1,14th	59	30	45	0.56	1.00
Wilson Canyon	76	12th	20	31st	60	31	46	0.62	0.00
Zephyr Cove	59	11th	19	25th	45	29	37	1.85	nr
Climate Division 2 (NE)									
Jarbidge	65	10,12th	12	30th	47	24	36	3.09	17.80
Reese River	70	9th	11	30th	54	22	38	0.46	0.00
Ruby Valley	m	m	m	m	m	m	m	m	m
Climate Division 3 (Central)									
Belmont	64	9,12th	15	15,30th	48	23	36	0.73	0.00
Gabbs	70	10-13th	23	15th	59	32	45	0.12	0.00
Goldpoint	68	9,12th	19	15,26th	54	27	41	0.11	0.00
Manhattan	62	11th	12	30th	49	26	37	0.04	4.00
Marietta	78	9th	19	15th	61	30	46	0.25	0.00
Pioche - Lister Ranch	72	10th	8	14th	55	23	39	1.20	3.00
Schurz (precip. only)								0.19	
Tonopah	72	9th	22	25,26,29,30th	56	28	42	0.02	0.20
Climate Division 4 (S)									
Boulder Beach	m	m	m	m	m	m	m	m	m
Las Vegas (NWS Station)	83	12th	31	4th	69	50	60	0.47	0.00
Lee Canyon	58	13th	6	16th	45	18	31	1.95	12.20
Overton Beach	85	11th	38	16th	72	46	59	0.38	0.00
Sandy Valley (precip. only)	m	m	m	m	m	m	m	m	m
California Stations									
Bare Ranch	m	m	m	m	m	m	m	m	m
Honey Lake Wildlife Refuge	m	m	m	m	m	m	m	m	m
Janesville, CA	74	13th	26	30th	57	36	46	3.27	2.00
Lake Tahoe - USCG	m	m	m	m	m	m	m	m	m
Truckee/Tahoe AP Dist., CA	63	8,9,11th	10	15,27th	47	19	33	4.67	14.00

* - Incomplete data m - Missing data
nr - Not Recorded

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